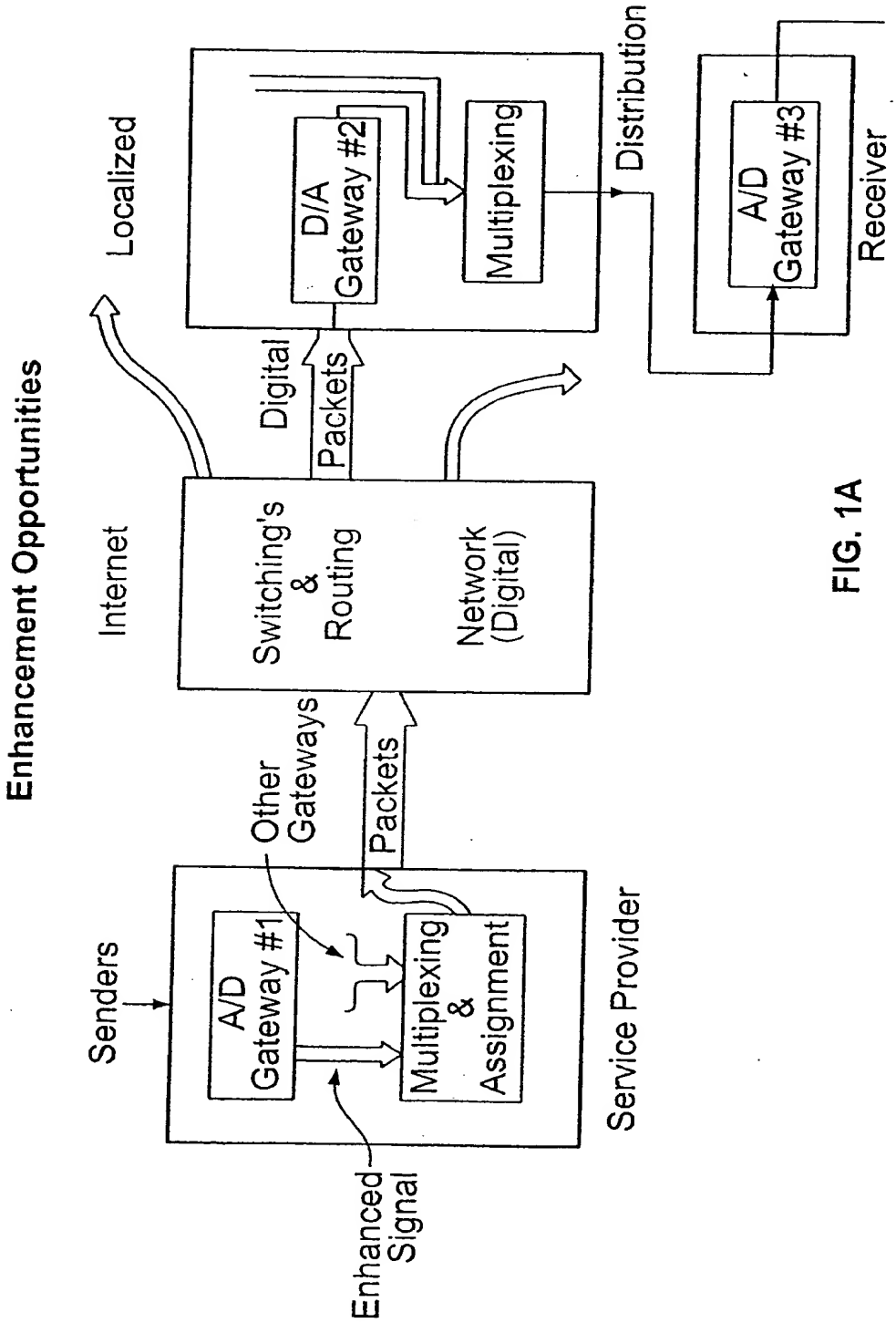


FIG. 1A

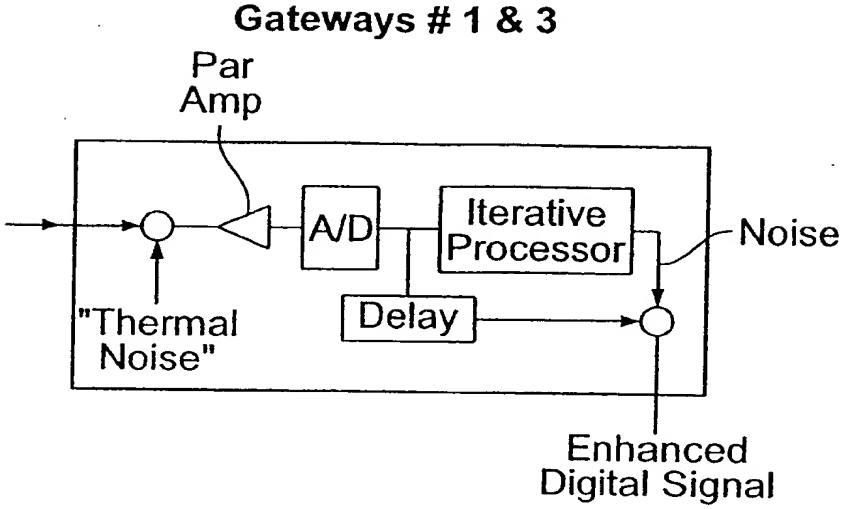

Gateways # 1 & 3
Par
Amp
A/D
Iterative
Processor
Noise
"Thermal
Noise"
Delay
Enhanced
Digital Signal

FIG. 1B

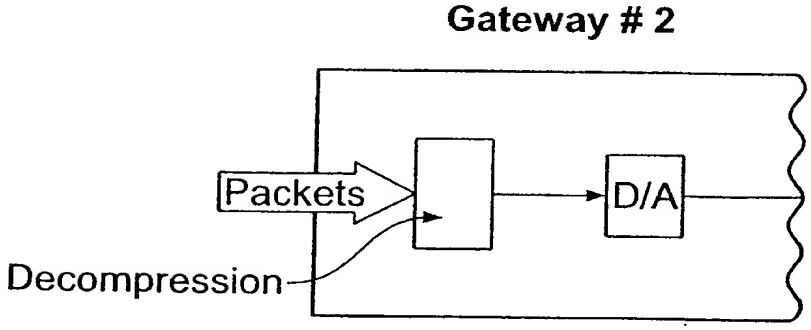

Gateway # 2
Packets
D/A
Decompression

FIG. 1C

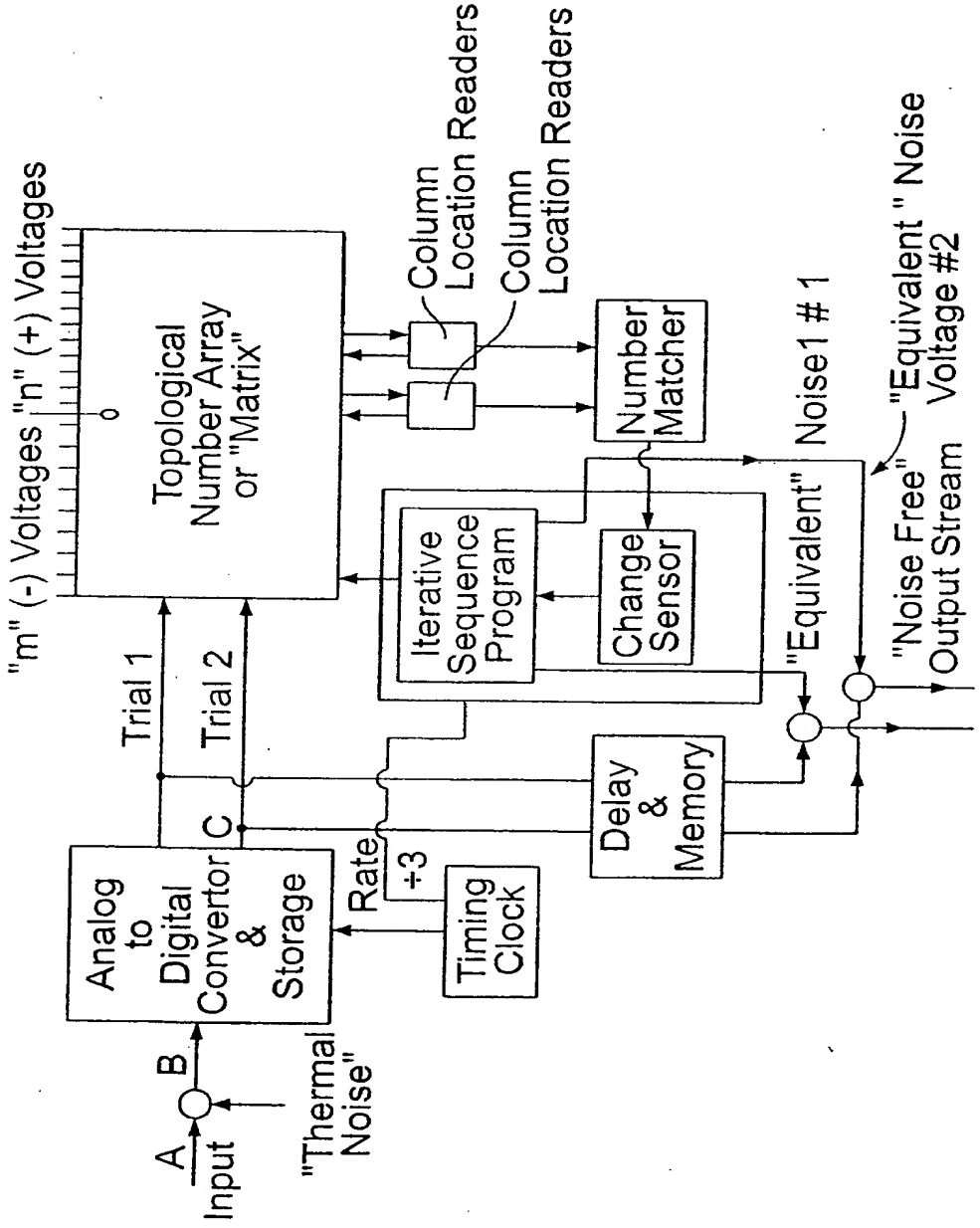

"m" (-) Voltages "n" (+) Voltages
Topological Number Array or "Matrix"
Column Location Readers
Column Location Readers
Number Matcher
Iterative Sequence Program
Change Sensor
"Equivalent" Noise1 # 1
"Equivalent " Noise Voltage #2
"Noise Free" Output Stream
Trial 1
Trial 2
C
Delay & Memory
Analog to Digital Convertor & Storage
Rate
÷3
Timing Clock
B
A
Input
"Thermal Noise"

FIG. 2

2-Wire ("Same" Signal - 2 Noises)

Option 1

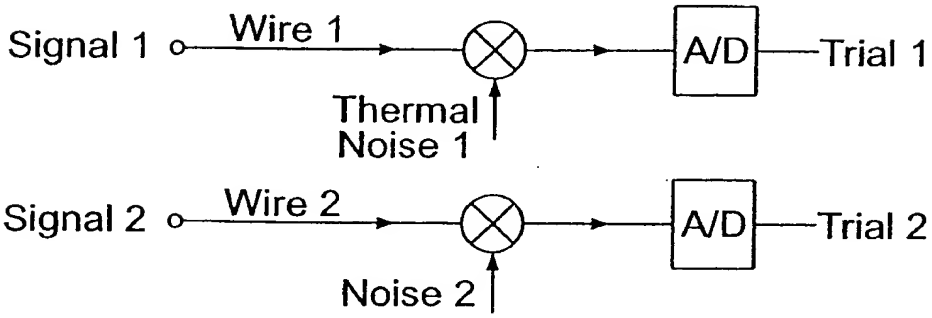


FIG. 3A

1-Wire Sequentially

Option 2

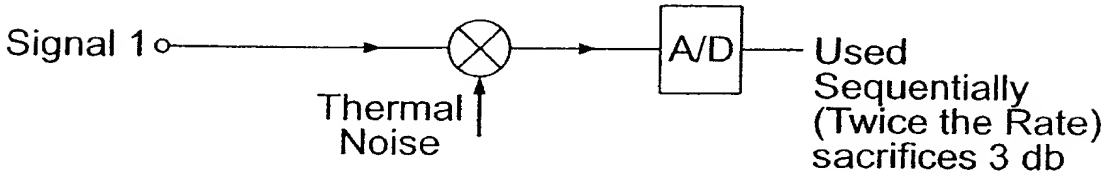


FIG. 3B

1-Wire Using in Phase I and Quadrature Q

Option 3

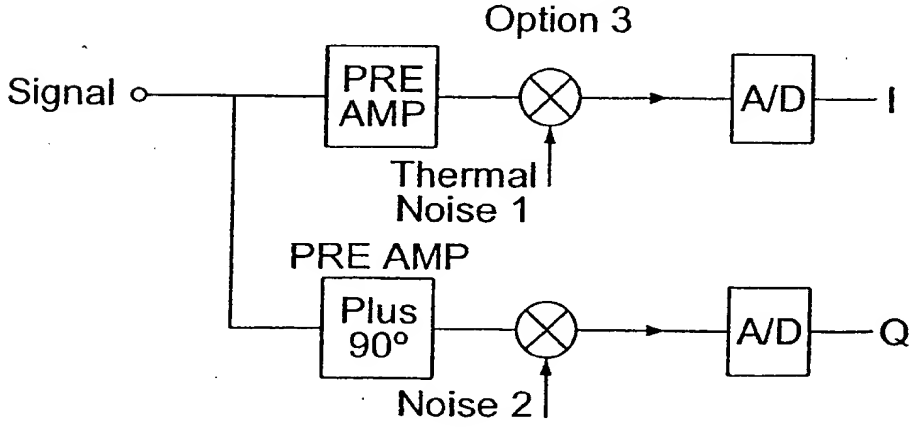


FIG. 3C

I data ...	0 dB ...	Group	Average I Values	Avgs Scanned in Opposite Sense

	Mic(A)	-0.9v	-0.85v	-0.80v	-0.75v	-0.70v	-0.65v	-0.60v	-0.55v	-0.50v	-0.45v	-0.40v	-0.35v	-0.30v	-0.25v	-0.20v	-0.15v	-0.1v
Avg 20B	0.041	1.206	1.156	1.106	1.056	1.006	1.956	0.906	0.856	0.806	0.756	0.706	0.656	0.606	0.556	0.506	0.456	0.406
		-0.552	-0.502	-0.452	-0.402	-0.352	-0.306	-0.252	-0.202	-0.152	-0.102	-0.052	0.002	0.048	0.098	0.148	0.198	0.248
Avg 21A	-0.052	-0.591	0.541	0.491	0.441	0.391	0.341	0.291	0.241	0.191	0.141	0.091	0.041	0.009	0.059	-0.109	-0.159	-0.209
		-1.161	-1.111	-1.061	-1.011	-.961	-0.911	-0.861	-0.811	-0.761	-0.711	-0.661	-0.611	-0.561	-0.511	-0.461	-0.411	-0.361
Avg 22A	0.060	0.735	0.685	0.635	0.585	0.535	0.485	0.435	0.385	0.335	0.285	0.235	0.185	0.135	0.085	0.035	-0.015	-0.065
		-1.005	-0.935	-0.905	-0.855	-0.805	-0.755	-0.705	-0.655	-0.605	-0.555	-0.505	-0.455	-0.405	-0.355	-0.305	-0.255	-0.205
Avg 23A	0.023	0.654	0.604	0.554	0.504	0.454	0.404	0.354	0.304	0.254	0.204	0.154	0.104	0.054	0.004	-0.046	-0.096	0.146
		-1.124	-1.074	-1.024	-0.974	-0.924	-0.874	-0.824	-0.774	-0.724	-0.674	-0.624	-0.574	-0.524	-0.474	-0.424	-0.374	-0.324
Avg 24A	-0.002	1.166	1.116	1.066	1.016	0.966	0.916	0.866	0.816	0.766	0.716	0.666	0.616	0.566	0.516	0.466	0.416	0.366
		-0.637	-0.587	-0.537	-0.487	-0.437	-0.387	-0.337	-0.287	-0.237	-0.187	-0.137	-0.087	-0.037	0.013	0.063	0.113	0.163
Avg 25B	-0.032	1.100	1.050	1.000	0.950	0.900	0.850	0.800	0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	0.350	0.250
		-0.732	-0.682	-0.632	-0.582	-0.532	-0.482	-0.432	-0.382	-0.332	-0.282	-0.232	-0.182	-0.132	-0.082	-0.032	0.018	0.068
Avg 26B	-0.163	0.487	0.432	0.387	0.337	0.287	0.237	0.187	0.137	0.087	0.037	-0.013	-0.063	-0.113	-0.163	-0.213	-0.263	-0.313
		-1.481	-1.431	-1.381	-1.331	-1.281	-1.231	-1.181	-1.131	-1.081	0.031	-0.981	-0.931	-0.881	-0.831	-0.781	-0.731	-0.681
Avg 27A	-0.120	0.924	0.874	0.824	0.774	0.724	0.674	0.624	0.574	0.524	0.474	0.424	0.374	0.324	0.274	0.224	0.174	0.124
		-0.756	-0.706	-0.656	-0.706	-0.556	-0.506	-0.456	-0.406	-0.356	-0.306	-0.256	-0.206	-0.156	-0.106	-0.056	-0.006	0.044
Avg 28C	-0.178	0.782	0.732	0.682	0.632	0.582	0.532	0.482	0.432	0.382	0.332	0.282	0.232	0.182	0.132	0.082	-0.032	-0.018
		-0.840	-0.790	-0.740	-0.690	-0.640	-0.590	-0.540	-0.490	-0.440	-0.380	-0.340	-0290	-0.240	-0.190	-0.140	-0.090	-0.040
Avg 29C	-0.129	1.246	1.196	1.146	1.096	1.046	0.996	0.946	0.896	0.846	0.796	0.746	0.696	0.646	0.596	0.546	0.496	0.446
		-0.683	-0.633	-0.583	-0.533	-0.483	-0.433	-0.383	-0.333	-0.283	-0.233	-0.183	-0.133	-0.063	-0.033	-0.017	0.067	0.117
Avg 30B	0.032	0.848	0.798	0.748	0.698	0.648	0.598	0.548	0.498	0.448	0.398	0.348	0.298	0.248	0.198	0.148	0.098	0.049
		-0.921	-0.871	-0.821	-0.771	-0.721	-0.671	-0.621	-0.571	-0.521	-0.471	-0.421	-0.371	-0.321	-0.271	-0.221	-0.171	-0.121
Avg 31C	-0.174	0.786	0.736	0.686	0.636	0.586	0.536	0.486	0.436	0.386	0.336	0.286	0.236	0.186	0.136	0.086	0.036	0.014
		-1.187	-1.137	-1.087	-0.037	-0.987	-0.937	-0.887	-0.837	-0.787	-0.737	-0.687	-0.637	-0.587	-0.537	-0.487	-0.437	-0.387
Avg 32C	-0.015	1.060	1.010	0.960	0.910	0.860	0.810	0.760	0.710	0.660	0.610	0.560	0.510	0.460	0.410	0.360	0.310	0.260
		-0.755	-0.705	-0.655	-0.605	-0.555	-0.505	-0.455	-0.405	-0.355	-0.305	-0.255	-0.205	-0.155	-0.105	-0.055	-0.005	0.045
Avg 33C	-0.050	0.993	0.943	0.893	0.843	0.793	0.743	0.693	0.643	0.593	0.543	0.493	0.443	0.393	0.343	0.333	0.243	0.193
		-0.887	-0.837	-0.787	-0.737	-0.687	-0.637	-0.587	-0.537	-0.487	-0.437	-0.387	-0.337	-0.287	-0.237	-0.187	-0.137	-0.087
Avg 34A	-0.203	0.530	0.480	0.430	0.380	0.330	0.280	0.230	0.180	0.130	0.080	-0.030	-0.020	-0.070	-0.120	-0.170	-0.220	-0.270
		-1.479	-1.429	-1.379	-1.329	-1.279	-1.229	-1.179	-1.129	-1.079	-1.029	-0.979	-0.929	-0.879	-0.829	-0.779	-0.729	-0.679
Avg 35C	-0.083	1.035	0.985	0.935	0.885	0.835	0.785	0.735	0.685	0.635	0.585	0.435	0.485	0.435	0.385	0.335	0.285	0.235
		-0.848	-0.798	-0.748	-0.698	-0.648	-0.598	-0.448	-0.498	-0.448	-0.398	-0.348	0.298	-0.248	-0.198	-0.148	-0.098	-0.048
Avg 36B	-0.213	1.171	1.121	1.071	1.021	0.971	0.921	0.871	0.821	0.771	0.721	0.671	0.621	0.571	0.521	0.471	0.421	0.371
		-0.841	-0.791	-0.741	-0.691	-0.641	-0.591	-0.541	-0.491	-0.441	-0.391	-0.341	-0.291	-0.241	-0.191	-0.141	-0.091	-0.041
Avg 37C	0.015	1.024	0.974	0.824	0.874	0.824	0.774	0.724	0.674	0.624	0.574	0.423	0.474	0.424	0.374	0.324	0.274	0.224
		-0.761	-0.711	-0.661	-0.611	-0.561	-0.511	-0.461	-0.411	-0.361	-0.311	-0.261	-0.211	-0.161	-0.111	-0.061	-0.011	0.039
Avg 38B	0.003	0.616	0.566	0.516	0.466	0.416	0.366	0.316	0.266	0.216	0.166	0.116	0.066	-0.016	-0.034	-0.084	-0.134	-0.184
		-1.181	-1.131	-1.081	-1.031	-0.981	-0.931	-0.881	-0.831	-0.781	-0.731	-0.687	-0.631	-0.581	-0.531	-0.481	-0.431	-0.381

FIG. 4A

-0.05V	0.00V	0.05V	0.10V	0.15V	0.20V	0.25V	0.30V	0.35V	0.40V	0.45V	0.50V	0.55V	0.60V	0.65V	0.70V	0.75V
0.356 0.298	0.306 0.348	0.256 0.398	0.206 0.448	0.156 0.498	0.106 0.548	0.056 0.598	0.006 0.648	-0.044 0.698	-0.094 0.748	-0.144 0.798	-0.194 0.848	-0.244 0.898	-0.294 0.948	-0.344 0.998	-0.394 1.048	-0.444 1.098
-0.159 -0.311	-0.209 -0.261	-0.259 -0.211	-0.309 -0.161	-0.359 -0.111	-0.409 -0.061	-0.459 -0.011	-0.509 0.039	-0.559 0.089	0.609 0.139	-0.659 0.189	-0.709 0.239	-0.759 0.289	-0.809 0.339	-0.859 0.389	-0.909 0.439	-0.959 0.489
-0.115 -0.155	-0.165 -0.105	-0.215 -0.055	-0.265 0.005	-0.315 0.045	-0.365 0.095	-0.415 0.145	-0.465 0.195	-0.515 0.245	-0.565 0.295	-0.615 0.345	-0.665 0.395	-0.715 0.445	-0.765 0.495	-0.815 0.545	-0.865 0.595	-0.915 0.645
-0.196 -0.274	-0.246 -0.224	-0.296 -0.174	-0.346 -0.124	-0.396 -0.074	-0.446 -0.024	-0.496 0.026	-0.546 0.076	-0.596 0.126	-0.646 0.176	-0.696 0.226	-0.746 0.276	-0.796 0.326	-0.846 0.376	-0.896 0.426	-0.946 0.476	-0.996 0.526
0.316 0.213	0.266 0.263	0.216 0.313	0.166 0.363	0.116 0.413	0.066 0.463	0.016 0.513	-0.034 0.563	-0.084 0.613	-0.134 0.663	-0.184 0.713	-0.234 0.763	-0.284 0.813	-0.334 0.863	-0.384 0.913	-0.434 0.963	-0.484 1.013
0.250 0.118	0.200 0.165	0.150 0.218	0.100 0.265	0.050 0.318	0.000 0.368	-0.050 0.418	-0.100 0.468	-0.150 0.518	-0.200 0.568	-0.250 0.618	-0.300 0.668	-0.350 0.718	-0.400 0.768	-0.450 0.818	-0.500 0.868	-0.550 0.918
-0.363 -0.631	-0.413 -0.581	-0.463 -0.531	-0.513 -0.481	-0.563 -0.431	-0.613 -0.381	-0.663 -0.331	-0.713 -0.281	-0.763 -0.231	-0.813 -0.181	-0.863 -0.131	-0.913 -0.081	-0.963 -0.031	-1.013 0.019	-1.063 0.069	-1.113 0.119	-1.163 0.169
0.074 0.094	0.024 0.144	-0.026 0.184	-0.076 0.244	-0.126 0.284	-0.176 0.344	-0.226 0.384	-0.276 0.444	-0.326 0.484	-0.376 0.544	-0.426 0.584	-0.476 0.644	-0.526 0.684	-0.576 0.744	-0.626 0.784	-0.676 0.844	-0.726 0.884
-0.068 0.010	-0.118 0.060	-0.168 0.110	-0.218 0.160	-0.268 0.210	-0.318 0.260	-0.368 0.310	-0.418 0.360	-0.468 0.410	-0.518 0.460	-0.568 0.510	-0.618 0.560	-0.668 0.610	-0.718 0.660	-0.768 0.710	-0.818 0.760	-0.868 0.810
0.396 0.167	0.346 0.217	0.296 0.267	0.246 0.317	0.196 0.367	0.146 0.417	0.096 0.467	0.046 0.517	-0.004 0.567	-0.054 0.617	-0.104 0.667	-0.154 0.717	-0.204 0.767	-0.254 0.817	-0.304 0.867	-0.354 0.917	-0.404 0.964
-0.002 -0.071	-0.052 0.021	-0.102 0.029	-0.152 0.079	-0.202 0.129	-0.252 0.179	-0.302 0.229	-0.352 0.279	-0.402 0.329	-0.452 0.379	-0.502 0.429	-0.552 0.479	-0.602 0.529	-0.652 0.579	-0.702 0.629	-0.752 0.679	-0.802 0.729
-0.064 -0.337	-0.114 -0.287	-0.164 -0.237	-0.214 -0.187	-0.264 -0.137	-0.314 -0.087	-0.364 -0.037	-0.414 0.013	-0.464 0.063	-0.514 0.113	-0.564 0.163	-0.614 0.213	-0.664 0.263	-0.714 0.313	-0.764 0.363	-0.814 0.413	-0.864 0.463
0.210 0.095	0.160 0.145	0.110 0.195	0.060 0.245	0.010 0.295	-0.040 0.345	-0.090 0.395	-0.140 0.445	-0.190 0.495	-0.240 0.545	-0.290 0.595	-0.340 0.645	-0.390 0.695	-0.440 0.745	-0.490 0.795	-0.540 0.845	-0.590 0.895
0.143 -0.037	0.093 0.013	0.043 0.063	-0.007 0.113	-0.057 0.163	-0.107 0.213	-0.157 0.263	-0.207 0.313	-0.257 0.363	-0.307 0.413	-0.357 0.463	-0.407 0.513	-0.457 0.563	-0.507 0.613	-0.557 0.663	-0.607 0.713	-0.657 0.763
-0.320 -0.629	-0.370 -0.579	-0.420 -0.529	-0.470 -0.479	-0.520 -0.429	-0.570 -0.379	-0.620 -0.329	-0.670 -0.279	-0.720 -0.229	-0.770 -0.179	-0.820 -0.129	-0.870 -0.079	-0.920 -0.029	-0.970 0.021	-1.020 0.071	-1.070 0.121	-1.120 0.171
0.185 0.002	0.135 0.052	0.085 0.102	0.035 0.152	-0.015 0.202	-0.065 0.252	-0.115 0.302	-0.165 0.352	-0.215 0.402	-0.265 0.452	-0.315 0.502	-0.365 0.552	-0.415 0.602	-0.465 0.652	-0.515 0.702	-0.565 0.752	-0.615 0.802
0.321 0.009	0.271 0.059	0.221 0.109	0.171 0.159	0.121 0.209	0.071 0.259	0.021 0.309	-0.029 0.359	-0.079 0.409	-0.129 0.459	-0.179 0.509	-0.229 0.559	-0.279 0.609	-0.329 0.659	-0.379 0.709	-0.429 0.759	-0.479 0.809
0.174 0.089	0.124 0.139	0.074 0.189	-0.024 0.239	-0.026 0.289	-0.076 0.339	-0.126 0.389	-0.176 0.439	-0.226 0.489	-0.276 0.539	-0.326 0.589	-0.376 0.639	-0.426 0.689	-0.476 0.739	-0.526 0.789	-0.576 0.839	-0.626 0.889
-0.234 -0.331	-0.284 -0.281	-0.334 -0.231	-0.384 -0.181	-0.434 -0.131	-0.484 -0.081	-0.534 -0.031	-0.584 0.019	-0.634 0.069	-0.684 0.119	-0.734 0.169	-0.784 0.219	-0.834 0.269	-0.884 0.319	-0.934 0.369	-0.984 0.419	-1.034 0.469

FIG. 4B

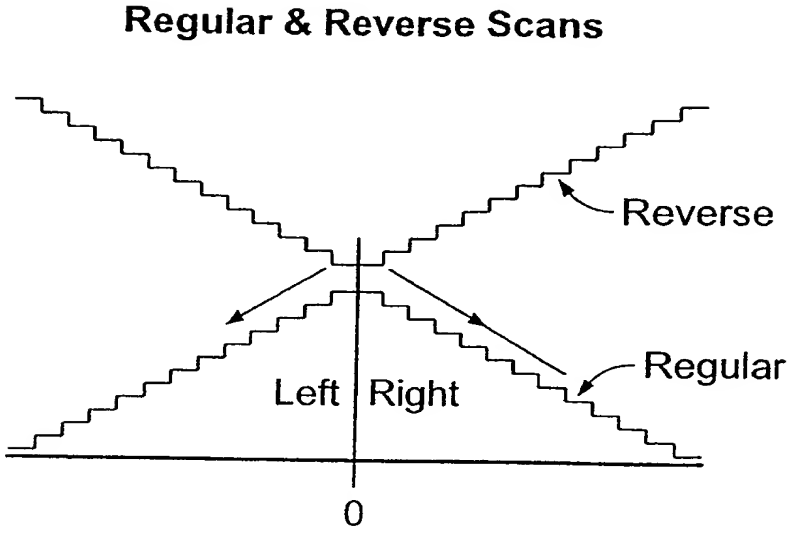

Regular & Reverse Scans
Reverse
Regular
Left
Right
0

FIG. 5A

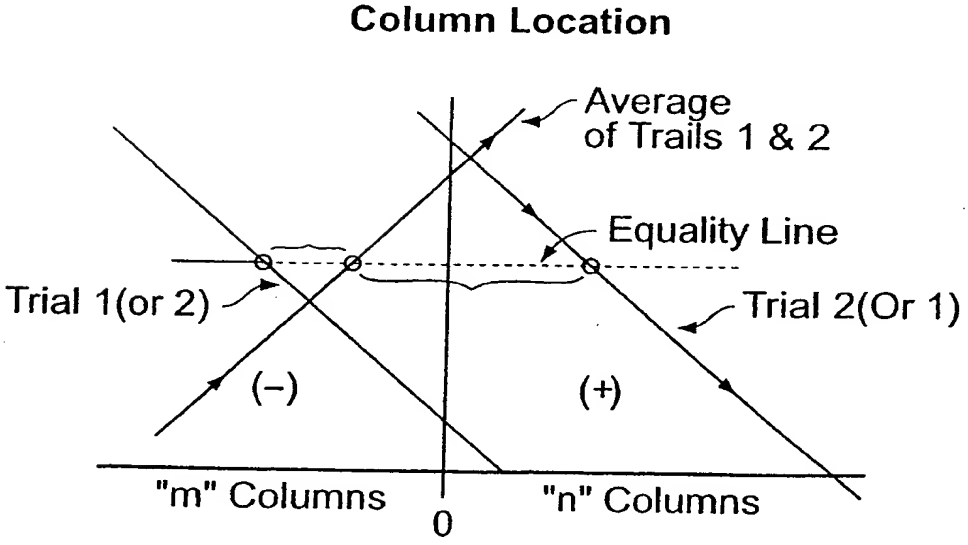
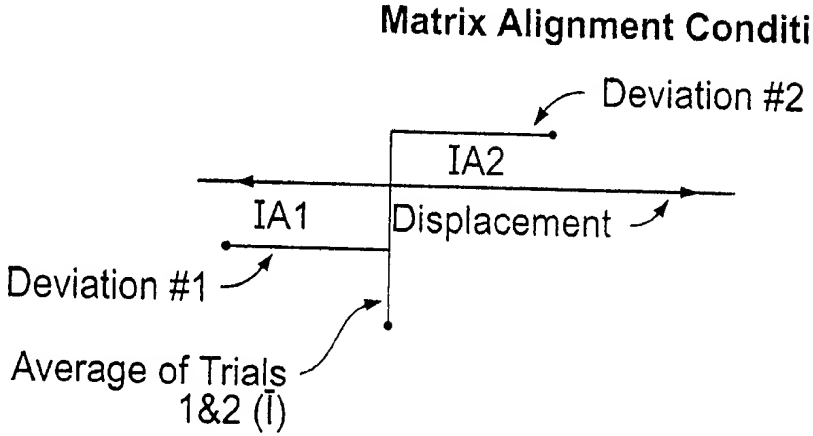

Column Location
Average
of Trails 1 & 2
Equality Line
Trial 1(or 2)
Trial 2(Or 1)
(–)
(+)
"m" Columns
0
"n" Columns

FIG. 5B

I data ... 0 dB ... Group Average I Values Avgs Scanned in Opposite Sense

	Mic(A)	-0.9v	-0.85v	-0.80v	-0.75v	-0.70v	-0.65v	-0.60v	-0.55v	-0.50v	-0.45v	-0.40v	-0.35v	-0.30v	-0.25v	-0.20v	-0.15v	-0.1v
Avg 20B	0.041	2.431 0.672	2.381 0.922	3.231 0.772	2.381 0.829	2.231 0.572	2.181 0.922	2.131 0.972	2.081 1.022	2.031 1.022	1.981 1.123	1.931 1.172	1.881 1.222	1.831 1.272	1.781 1.322	1.731 1.372	1.681 1.422	1.531 1.472
Avg 21A	-0.052	1.916 0.064	1.866 0.114	1.816 0.164	1.766 0.214	1.716 0.264	1.666 0.014	-1.616 0.364	1.566 0.414	1.516 0.464	1.466 0.516	1.416 0.564	1.366 0.614	1.316 0.664	1.265 0.716	1.216 0.764	1.166 0.816	1.116 0.864
Avg 22A	0.060	1.960 0.220	1.910 0.270	1.860 0.320	1.810 0.370	1.760 0.420	1.710 0.470	1.660 0.520	1.610 0.570	1.560 0.620	1.510 0.670	1.460 0.720	1.410 0.770	1.360 0.820	1.310 0.870	1.260 0.920	1.210 0.970	1.160 1.020
Avg 23A	0.022	1.878 0.101	1.828 0.151	1.778 0.201	1.728 0.251	1.678 0.301	1.628 0.351	1.578 0.401	1.526 0.451	1.478 0.501	1.428 0.551	1.378 0.601	1.328 0.651	1.278 0.701	1.228 0.751	1.178 0.801	1.128 0.861	1.078 0.901
Avg 24A	-0.002	2.390 0.588	2.360 0.638	3.290 0.688	2.340 0.738	2.190 0.789	2.140 0.838	2.030 0.888	2.040 0.938	1.990 0.999	1.940 1.038	1.870 1.088	1.840 1.138	1.780 1.188	1.740 1.238	1.690 1.298	1.640 1.238	1.690 1.388
Avg 25B	-0.032	2.325 0.493	2.275 0.543	2.225 0.593	2.175 -0.663	2.125 0.693	2.075 0.763	2.025 0.793	1.975 0.863	1.925 0.883	1.875 0.963	1.825 0.993	1.775 1.043	1.725 1.093	1.675 1.163	1.625 1.193	1.575 1.243	1.525 1.293
Avg 26B	-0.169	1.712 0.257	1.662 -0.207	1.612 -0.157	1.562 -0.107	1.512 -0.057	1.162 -0.007	1.412 0.043	1.362 0.093	1.312 0.143	1.262 0.193	1.212 0.243	1.162 0.293	1.112 0.343	1.062 0.393	1.012 0.443	0.863 0.493	0.912 0.543
Avg 27A	0.120	2.168 0.468	2.033 0.518	2.068 0.568	1.333 0.618	1.963 0.668	1.873 0.748	1.843 0.768	1.739 0.818	1.743 0.868	1.677 0.918	1.647 0.968	1.593 1.018	1.548 1.068	1.493 1.118	1.418 1.168	1.399 1.218	1.319 1.268
Avg 28C	0.178	2.002 0.385	1.957 0.435	1.907 0.485	1.857 0.535	1.807 0.595	1.757 0.635	1.707 0.685	1.657 0.735	1.607 0.785	1.557 0.835	1.507 0.885	1.457 0.935	1.407 0.985	1.357 1.035	1.307 1.085	1.257 1.135	1.207 1.185
Avg 29C	-0.129	2.471 0.542	2.421 0.592	2.371 0.642	2.321 0.692	2.271 0.742	2.221 0.792	2.171 0.842	2.121 0.892	2.071 0.942	2.021 0.992	1.971 1.042	1.921 1.092	1.871 1.142	1.821 1.192	1.771 1.242	1.721 1.292	1.671 1.342
Avg 30B	0.032	2.073 0.304	2.023 0.354	1.973 0.404	1.923 0.454	1.873 0.504	1.823 0.554	1.773 0.604	1.723 0.554	1.673 0.704	1.623 0.754	1.573 0.800	1.523 0.854	1.673 0.904	1.423 0.954	1.373 1.004	1.323 1.054	1.273 1.104
Avg 31C	-0.174	2.011 0.037	1.961 0.087	1.811 0.137	1.861 0.187	1.811 0.237	1.761 0.287	1.711 0.337	1.661 0.387	1.611 0.437	1.561 0.497	1.511 0.537	1.461 0.587	1.411 0.637	1.361 0.687	1.311 0.737	1.261 0.787	1.211 0.837
Avg 32C	-0.015	2.285 0.470	2.235 0.520	2.185 0.570	3.135 0.620	2.085 0.670	2.035 0.720	1.985 0.770	1.935 0.820	1.885 0.870	1.835 0.820	1.785 0.970	1.735 1.020	1.685 1.070	1.635 1.120	1.585 1.170	1.535 1.220	1.485 1.270
Avg 33C	-0.080	2.218 0.338	2.168 0.388	2.118 0.438	2.068 0.188	2.018 0.538	1.868 0.588	1.818 0.638	1.868 0.688	1.818 0.738	1.768 0.788	1.718 0.838	1.668 0.888	1.618 0.338	1.568 0.998	1.518 1.038	1.468 1.088	1.418 1.138
Avg 34A	-0.209	1.755 -0.255	1.705 -0.205	1.655 -0.155	1.605 -0.105	1.555 -0.055	1.505 -0.005	1.455 0.045	1.405 0.095	1.355 0.145	1.305 0.195	1.255 0.245	1.205 0.295	1.155 0.345	1.105 0.395	1.055 0.445	1.005 0.495	0.955 0.545
Avg 35C	-0.083	2.260 0.377	2.210 0.427	2.160 0.477	2.110 0.527	2.060 0.577	2.010 0.627	1.960 0.677	1.910 0.727	1.860 0.777	1.810 0.827	1.760 0.877	1.710 0.927	1.660 0.977	1.610 1.027	1.660 1.077	1.510 1.127	1.460 1.177
Avg 36B	-0.252	2.396 0.384	2.366 0.435	2.226 0.484	2.246 0.534	2.196 0.584	2.146 0.634	2.096 0.684	2.046 0.734	1.936 0.786	1.966 0.834	1.836 0.894	1.646 0.934	1.396 0.994	1.746 1.034	1.696 1.084	1.646 1.134	1.596 1.184
Avg 37C	0.015	2.249 0.463	2.199 0.519	2.149 0.563	2.099 0.613	2.049 0.663	1.999 0.713	1.943 0.763	1.899 0.813	1.843 0.863	1.739 0.913	1.749 0.963	1.699 1.013	1.669 1.063	1.599 1.113	1.549 1.163	1.499 1.213	1.449 1.263
Avg 38B	0.003	1.841 0.044	1.791 0.094	1.714 0.144	1.691 0.194	1.661 0.344	1.531 0.394	1.545 0.344	1.491 0.394	1.441 0.444	1.321 0.494	1.341 0.544	1.291 0.594	1.241 0.444	1.191 0.694	1.141 0.244	1.091 0.794	1.041 0.844

FIG. 6



NOTE THAT: AVERAGE I = I signal + I average noise

ROW OF MINIMUM ABSOLUTE DEVIATION: I signal = I noise closest to Av noise

AMOUNT OF DEVIATION = |IA| of the ± polarity

OF EQUIVALENT COLUMN SHIFT = |IA| ÷ COLUMN SPACING

FIG. 7

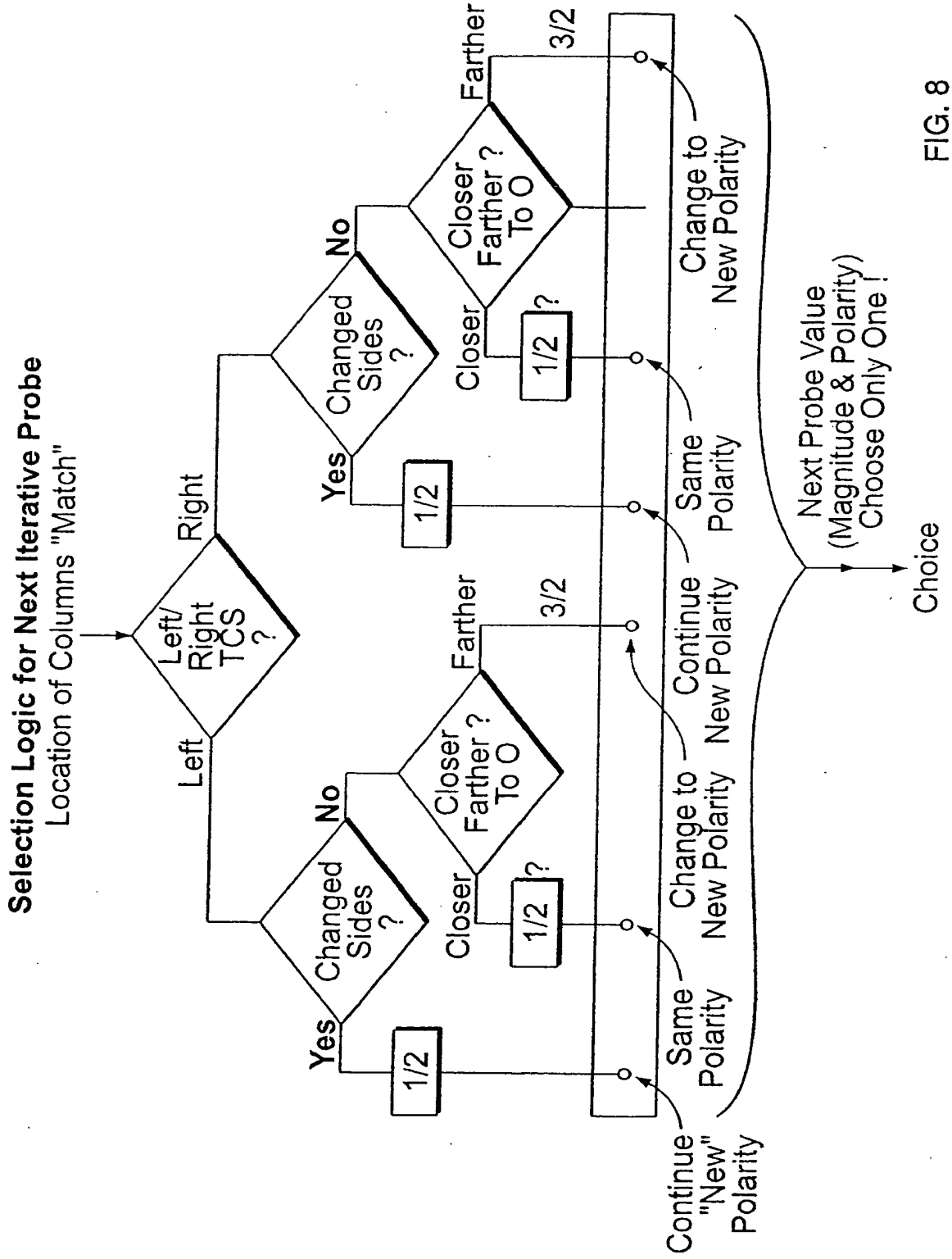

Selection Logic for Next Iterative Probe
Location of Columns "Match"
Left/ Right TCS ?
Left
Right
Changed Sides ?
No
Yes
Closer Farther ? To O
Closer
Farther
1/2
?
3/2
Same Polarity
Change to New Polarity
Continue New Polarity
Continue "New" Polarity
Next Probe Value (Magnitude & Polarity) Choose Only One !
Choice

FIG. 8

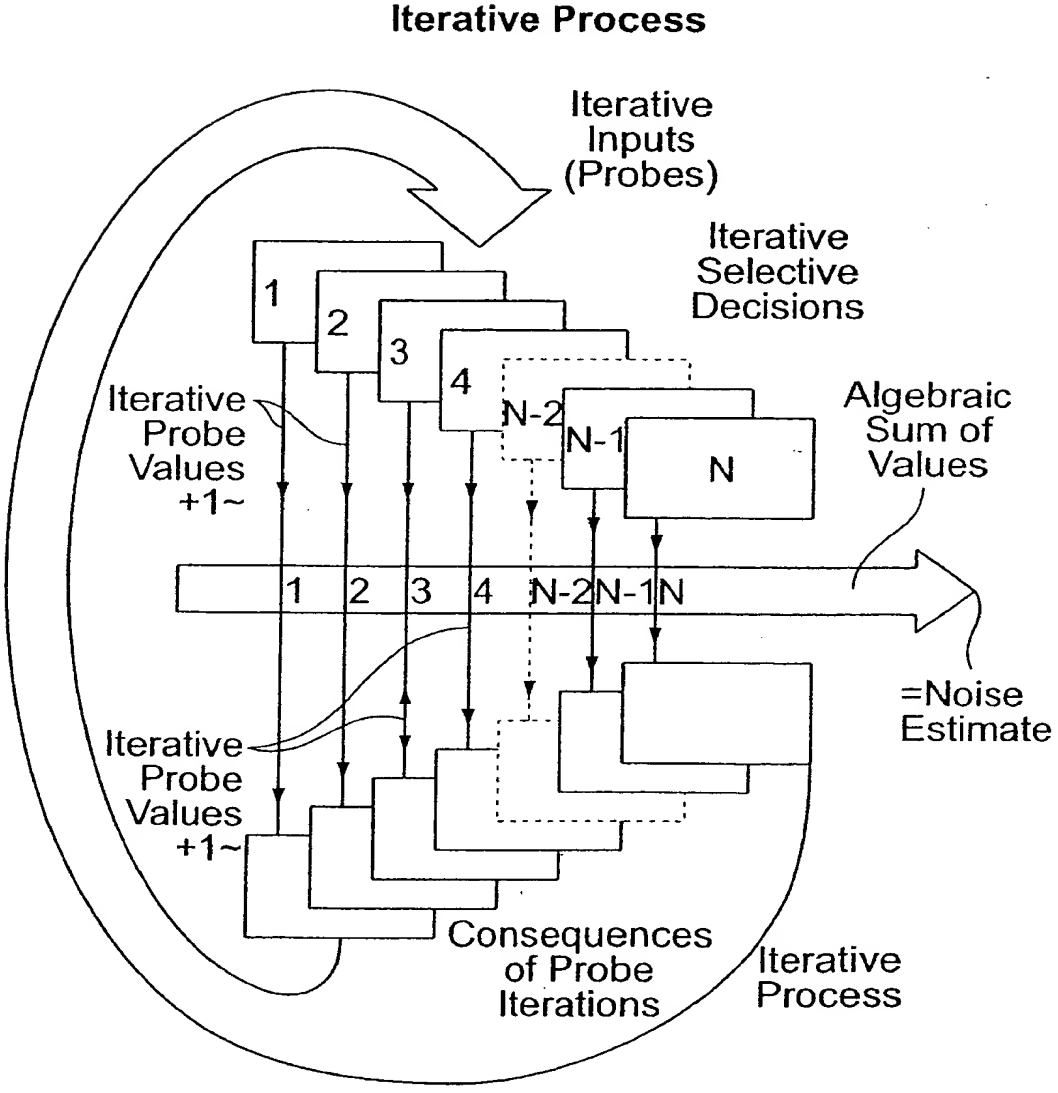

Iterative Process
Iterative Inputs (Probes)
Iterative Selective Decisions
1
2
3
4
N-2
N-1
N
Iterative Probe Values +1~
Algebraic Sum of Values
1 2 3 4 N-2 N-1 N
=Noise Estimate
Iterative Probe Values +1~
Consequences of Probe Iterations
Iterative Process

FIG. 9

Augmentation of Selection Logic

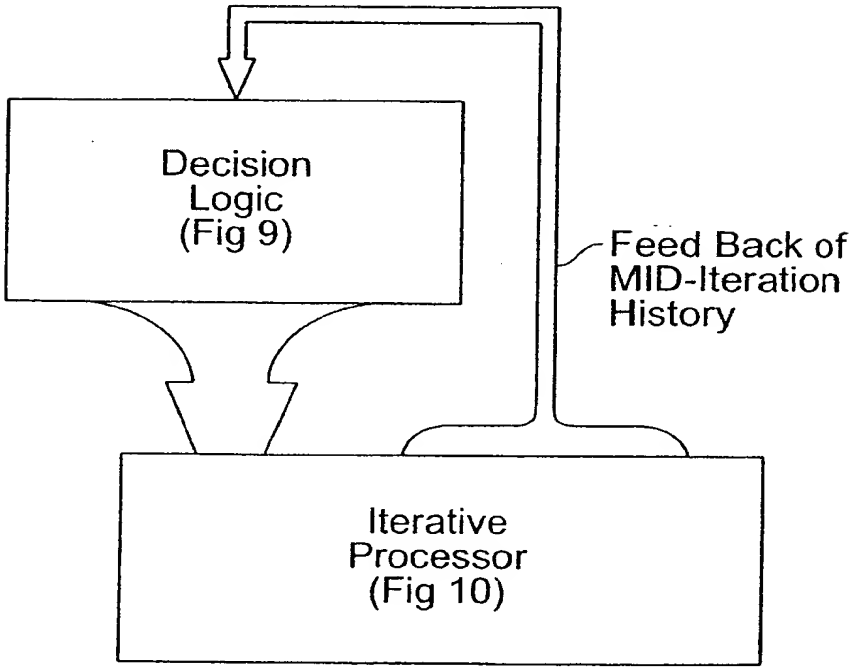


FIG. 10

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RANDOM Q data

Trial Group	Orig Noise Avg	New Noise Average 1	2	3	4	5	Equiv Voltage Added	Last Noise Avg	Ratio Orig Last
205 1	0.4440	0.3970	0.1470	-0.1030	0.0220	-0.0405	-0.4532	-0.0092	48.1
205 2	0.1928	0.0077	-0.2423	0.0087	-0.1173	-0.0548	-0.2163	-0.0235	8.2
205 3	0.2307	0.0107	-0.2198	0.0507	-0.0943	-0.0318	-0.2313	-0.0006	382.9
206 1	0.6667	0.6649	0.3149	0.0619	-0.0601	0.0024	-0.5355	-0.0289	23.1
206 2	-0.0969	0.1153	-0.1347	0.1158	-0.0097	0.0528	0.1174	0.0215	4.5
206 3	0.0218	-0.2565	-0.0065	0.2435	0.1185	0.0060	0.0030	0.0248	0.9
207 1	0.7412	0.7198	0.4694	0.2194	0.0944	0.0319	-0.7406	0.0006	1181.1
207 2	-0.2973	-0.2622	-0.0022	0.2478	0.1228	0.0603	0.3263	0.0290	10.2
207 3	0.3031	-0.0517	0.1983	-0.0517	0.0733	0.0108	-0.4036	-0.0205	18.7
208 1	0.2199	0.1728	-0.0772	0.1229	0.0478	-0.0147	-0.2033	0.0166	13.3
208 2	0.4198	0.3966	0.1466	-0.1034	0.0216	-0.0409	-0.4295	-0.0097	43.4
208 3	-0.1523	-0.0900	0.1600	-0.0900	0.0350	-0.0275	0.1561	0.0038	40.1
209 1	-0.3033	-0.2685	-0.0185	0.2315	0.1065	0.0440	0.3161	0.0187	23.8
209 2	-0.0802	0.0528	-0.1972	0.0528	-0.0722	-0.0097	0.1024	0.0216	3.7
209 3	-0.0148	0.1385	-0.1115	0.1385	0.0135	-0.0490	-0.0029	-0.0177	0.8
210 1	0.2507	0.1607	-0.0693	0.1607	0.0357	-0.0268	-0.2462	0.0044	56.8
210 2	0.2427	0.2049	-0.0451	0.2049	0.0799	0.0174	-0.2666	-0.0139	17.5
210 3	0.0961	-0.0761	0.1739	-0.0741	0.0689	-0.0136	-0.0784	0.0177	5.4
211 1	0.8869	0.2232	-0.0268	0.2232	0.0982	0.0357	-0.2326	0.0044	53.5
211 2	0.4865	0.2534	0.0031	-0.2446	-0.1816	-0.0591	-0.5143	-0.0278	17.5
211 3	-0.7412	-0.7084	-0.4584	-0.2039	-0.0789	-0.0164	0.7660	0.0148	50.1
212 1	0.5285	0.3926	0.1426	-0.1074	0.0176	-0.0449	-0.5421	-0.0136	38.8
212 2	0.1817	0.0830	-0.1679	0.0830	-0.0420	0.0205	-0.1925	-0.0107	16.9
212 3	-0.0208	0.1420	-0.1086	0.1420	0.0170	-0.0455	0.0056	-0.0142	1.5
213 1	-0.2570	-0.1652	0.0848	-0.1652	-0.0402	0.0223	0.2480	-0.0090	28.7
213 2	-0.0064	0.0310	-0.2190	0.0310	-0.0940	-0.0315	0.0067	-0.0003	24.3
213 3	-0.5096	-0.3200	-0.0700	0.1800	0.0550	-0.0075	0.5333	0.0237	21.5
214 1	-0.0216	0.1703	-0.0295	0.1203	0.0453	-0.0172	0.0287	0.0141	1.8
214 2	-0.1596	-0.0912	0.1586	-0.0312	0.0338	-0.0287	0.1620	0.0025	62.8
214 3	0.1216	-0.0494	0.2006	-0.0494	0.0756	0.0131	-0.1398	-0.0181	6.7
215 1	-0.3403	-0.0218	0.2287	-0.0213	0.1037	0.0412	0.3502	0.0099	34.3
215 2	-0.1557	-0.0243	0.2257	-0.0243	0.1007	0.0382	0.1627	0.0069	22.4
215 3	-0.5943	-0.3037	-0.0537	0.1963	0.0713	0.0088	0.5718	-0.0225	26.5
216 1	0.1581	0.0252	-0.2218	0.0282	-0.0968	-0.0343	-0.1614	-0.0030	52.0
216 2	0.3981	0.3294	0.1294	-0.1206	0.0044	-0.0581	-0.4250	-0.0268	14.0
216 3	0.1159	-0.0841	0.1659	-0.0841	0.0409	-0.0216	-0.1063	0.0097	12.0
217 1	0.4497	0.2497	-0.0003	0.2497	0.1257	0.0522	-0.4188	0.0309	14.5
217 2	0.5273	0.2169	-0.0331	0.2169	0.0919	0.0294	-0.5292	-0.0019	278.7
217 3	0.1066	-0.0700	0.1800	-0.0700	0.0550	-0.0075	-0.0829	0.0238	4.5
218 1	-0.4485	-0.2822	-0.0322	0.2178	0.0928	0.0303	0.4475	-0.0010	453.7
218 2	0.0983	-0.1467	0.1058	-0.1447	-0.0197	0.0428	-0.0867	0.0115	8.5
218 3	0.0171	-0.1190	0.1310	-0.1190	0.0060	-0.0565	-0.0423	-0.0252	0.7
219 1	0.0508	-0.1111	0.1389	-0.1111	0.0139	-0.0485	-0.0681	-0.0173	2.9
219 2	0.2668	0.0668	-0.1862	0.0668	-0.0582	0.0043	-0.2938	-0.0270	9.9
219 3	-0.2172	-0.1891	0.0609	-0.1891	-0.0641	-0.0016	0.3088	0.0296	8.4
220 1	0.6507	0.4095	0.3595	0.1095	-0.0155	0.0470	-0.6349	0.0158	41.2
220 2	0.6336	0.3617	0.1112	-0.1383	-0.0144	0.0498	-0.6157	0.0179	35.4
220 3	-0.1340	0.1748	-0.0756	0.1748	0.0438	-0.0127	0.1565	0.0185	3.2

Original Noise

Result of Each of 1st Five (of Six Iterations)

This Column Yields "Estimate" Noise (Sum of Values Added)

Residual Noise

Voltage Ratio

FIG. 11